CLAIMS

- 1. A process for deriving dendritic cells from mononuclear cells in culture, wherein said cells are peripheral blood mononuclear cells (PBMC) or CD14+ monocytes, comprising the step of putting in contact said mononuclear cells with type I interferon (IFN) at a final concentration greater than 100 IU/ml, since the initial culture thereof.
 - 2. The process according to claim 1, wherein said step is carried out within 3 days of culture.
 - 3. The process according to claim 1, wherein said type I IFN used is selected from the group consisting of any natural IFN α , any recombinant species of IFN α , natural or recombinant IFN β and any synthetic type I IFN.
 - 4. The process according to claim 2, wherein said type I IFN used is selected from the group consisting of any natural IFN α , any recombinant species of IFN α , natural or recombinant IFN β and any synthetic type I IFN.
 - 5. The process according to claim 1, wherein said final concentration is in a range of 100-10,000 IU/ml.
 - 6. The process according to claim 2, wherein said final concentration is in a range of 100-10,000 IU/ml.
 - 7. The process according to claim 5, wherein said final concentration is in a range of $400-10,000 \, \text{IU/ml}$.
 - 8. The process according to claim 6, wherein said final concentration is in a range of 400-10,000 IU/ml.
 - 9. The process according to claim 7, wherein said final concentration is in a range of 500-2,000 IU/ml.
 - 10. The process according to claim 8, wherein said final concentration is in a range of $500-2,000 \; \text{IU/ml}$.

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- 11. The process according to claim 9, wherein said final concentration is 1,000 IU/ml.
- 12. The process according to claim 10, wherein said final concentration is 1,000 IU/ml.
- 13. The process according to claim 1, wherein said step is carried out in presence of a cell growth factor.
- 14. The process according to claim 2, wherein said step is carried out in presence of a cell growth factor.
- 15. The process according to claim 13, wherein said growth factor is GM-CSF.
- 16. The process according to claim 14, wherein said growth factor is GM-CSF.
- 17. The process according to claim 15, wherein said GM-CSF is used at a concentration in a range of 250-1,000 U/ml.
- 18. The process according to claim 16, wherein said GM-CSF is used at a concentration in a range of 250-1,000 U/ml.
- 19. The process according to claim 1, wherein said process further includes the step of putting in contact dendritic cells, obtained by treating mononuclear cells with type I IFN, with a maturation agent.
- 20. The process according to claim 2, wherein said process further includes the step of putting in contact dendritic cells, obtained by treating mononuclear cells with type I IFN, with a maturation agent.
- 21. The method of use of type I IFN as an agent allowing the ex vivo derivation of dendritic cells from mononuclear cells, the type I IFN being put in contact with said mononuclear cells, since the initial culture thereof and at a final concentration greater than 100 IU/ml.
 - 22. The method of use according to claim 21, wherein said type I IFN is used in combination with a cell growth factor which can be GM-CSF.

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- 23. The method of use according to claim 22, wherein said type I IFN concentration is in a range of 100-10,000 IU/ml.
- 24. The method of use according to claim 23, wherein said type I IFN concentration is in a range of 500-2,000 IU/ml.
- 25. The method of use according to claim 24, wherein said type I IFN concentration is 1,000 IU/ml.
- 26. Dendritic cells obtainable by the process according to claim 1.
- 27. Dendritic cells obtainable by the process according to claim 2.
- 28. The dendritic cells according to claim 26, said cells being loaded with antigenic peptides or proteins, or with a cellular extract containing at least one antigen, or with nucleic acids.
- 29. The dendritic cells according to claim 27, said cells being loaded with antigenic peptides or proteins, or with a cellular extract containing at least one antigen, or with nucleic acids.
- 30. A kit for deriving a dendritic cell from a mononuclear cell in culture, comprising
 - -the elements necessary for the culture and the washings, including bag(s), connecting tube(s),
 - -a composition comprising type I IFN and compatible additives,
 - -a composition comprising a cell growth factor and compatible additives, and
 - -a culture medium,
 - for simultaneous, separate or sequential use in the process according to claim 1.
- 31. A kit for deriving a dendritic cell from a mononuclear cell in culture, comprising
 - -the elements necessary for the culture and the washings, including bag(s), connecting tube(s),

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- -a composition comprising type I IFN and compatible additives,
- -a composition comprising a cell growth factor and compatible additives, and
- -a culture medium,
- for simultaneous, separate or sequential use in the process according to claim 2.
- 32. A pharmaceutical composition comprising, as an active principle, the dendritic cells according to claim 1, together with a pharmaceutically acceptable carrier vehicle or auxiliary agent.
- 33. A pharmaceutical composition comprising, as an active principle, the dendritic cells according to claim 2, together with a pharmaceutically acceptable carrier vehicle or auxiliary agent.
- 34. A vaccine, comprising, as an active principle, the dendritic cells according to claim 1.
- 35. A vaccine, comprising, as an active principle, the dendritic cells according to claim 2.
- 36. A vaccine comprising, as an adjuvant, the dendritic cells according to claim 1 together with an immunogen and a pharmaceutically acceptable carrier vehicle or auxiliary agent.
- 37. A vaccine comprising, as an adjuvant, the dendritic cells according to claim 2 together with an immunogen and a pharmaceutically acceptable carrier vehicle or auxiliary agent.
- 38. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a pharmaceutical composition according to claim 32 to a subject in need thereof.
- 39. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a pharmaceutical

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composition according to claim 33 to a subject in need thereof.

- 40. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 34 to a subject in need thereof.
- 41. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 35 to a subject in need thereof.
- 42. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 36 to a subject in need thereof.
- 43. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 37 to a subject in need thereof.
- 44. A method according to claim 40, wherein said pathology is an infection or a neoplastic disease.
- 45. A method according to claim 41, wherein said pathology is an infection or a neoplastic disease.
- 46. A method according to claim 42, wherein said pathology is an infection or a neoplastic disease.
- 47. A method according to claim 43, wherein said pathology is an infection or a neoplastic disease.
- 48. A method according to claim 38, wherein administration is located at the site of the infection or within the primary tumor.
- 49. A method according to claim 39, wherein administration is located at the site of the infection or within the primary tumor.
 - 50. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T

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cells with the dendritic cells according to claim 26.

- 51. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T cells with the dendritic cells according to claim 27.
- 52. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T cells with the dendritic cells according to claim 28.
- 53. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T cells with the dendritic cells according to claim 29.

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